

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF WISCONSIN**

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**DAVID ROWLEY,**  
**Plaintiff,**

**v.**

**Case No. 11-CV-46**

**UNION PACIFIC RAILROAD COMPANY,**  
**Defendant.**

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**DECISION AND ORDER**

David Rowley worked for Chicago and Northwestern Railroad, which later became Union Pacific Railroad Company (Union Pacific), from 1974 to 2009. He worked on rail cars, inspecting and repairing them and changing their brake shoes and air hoses. In 1998, he was diagnosed with degenerative arthritis, also called osteoarthritis, in both hands. His condition worsened, and in 2008, he was diagnosed with erosive arthritis in both hands. In 2011, he brought this action against Union Pacific under the Federal Employers' Liability Act (FELA), 45 U.S.C. § 51, alleging that Union Pacific's negligence caused his osteoarthritis.

Before me now are Union Pacific's motions to exclude proposed expert testimony from Marc Turina, an ergonomist; Andrew Jasek, Rowley's former treating physician; and Dennis Gates, a retained medical expert. The admissibility of expert testimony is governed by Rule 702 of the Federal Rules of Evidence and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and its progeny. "Rule 702 and *Daubert* require the district court to determine whether proposed expert testimony is both relevant and reliable." *Higgins v. Koch Dev. Corp.*, 794 F.3d 697, 704 (7th Cir. 2015)

(citing *Zelinski v. Columbia 300, Inc.*, 335 F.3d 633, 640 (7th Cir. 2003)). Union Pacific disputes only the reliability of the proposed expert testimony, not its relevance.

## **I. LEGAL STANDARD**

Assessing reliability requires me to determine whether a given expert is qualified in the relevant field and whether he has employed a reliable methodology in arriving at his opinions. *Id.* “[E]xperts’ work is admissible only to the extent it is reasoned, uses the methods of the discipline, and is founded on data.” *Id.* at 705 (quoting *Lang v. Kohl’s Food Stores*, 217 F.3d 919, 924 (7th Cir. 2000)). In *Daubert*, the Supreme Court provided a list of factors that may bear upon the reliability of expert testimony: “(1) whether the theory has been or is capable of being tested; (2) whether the theory has been subjected to peer review and publication; (3) the theory’s known or potential rate of error; and (4) the theory’s level of acceptance within the relevant community.” *Bielskis v. Louisville Ladder, Inc.*, 663 F.3d 887, 894 (7th Cir. 2011) (citing *Daubert*, 509 U.S. at 593–94). But, “the test of reliability is ‘flexible,’ and *Daubert*’s list of specific factors neither necessarily nor exclusively applies to all experts or in every case.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999). As such, “[a] district court enjoys broad latitude both in deciding how to determine reliability and in making the ultimate reliability determination.” *Higgins*, 794 F.3d at 704 (alteration in original) (quoting *Bryant v. City of Chicago*, 200 F.3d 1092, 1098 (7th Cir. 2000)).

## **II. MARC TURINA**

Marc Turina is a Certified Professional Ergonomist and licensed physical therapist with a master’s degree in physical therapy, he has done continuing coursework in and attended seminars on ergonomics, and he has relevant professional

experience as an ergonomic consultant. Turina opines that (1) exposure to “ergonomic risk factors” can cause “work-related musculoskeletal disorders” like osteoarthritis, (2) Rowley was regularly exposed to ergonomic risk factors throughout his thirty-five-year career, and (3) Union Pacific was aware of both the exposure Rowley faced and the disorders such exposure can cause but failed to take significant action to address the risks he faced. Turina based his opinions on his “education, training, personal investigation, review of applicable scientific literature, and over 18 years of experience in the field of ergonomics and musculoskeletal injury prevention and treatment,” as well as his review of various case materials. ECF No. 60-2, at 1.

Initially, Union Pacific argues that Turina is not qualified to offer an opinion on specific causation in this case (*i.e.*, that Rowley’s exposure to ergonomic risk factors *did* cause his osteoarthritis). This argument is moot because, according to Rowley, Turina “is not opining on specific causation” but is instead “offering a general causation opinion that the ergonomic risk factors he identifies as being present in the job tasks he analyzed are associated with the development of arthritis in the hands.” Pl.’s Mem., ECF No. 60, at 4.

Turina derives his opinions from the general theory that exposure to recognized ergonomic risk factors—including awkward postures, forceful exertions, repetitive motions, contact stresses, and cold temperatures—can cause musculoskeletal disorders like osteoarthritis, which develop slowly over months or years. Turina cites a wealth of research in support of this theory, demonstrating that it has been extensively tested, has been repeatedly subjected to peer review and publication, and is generally accepted within the ergonomic and scientific communities. Thus, the theory fares well

under the *Daubert* factors. Turina further discusses how properly designed hand tools and the proper use thereof can minimize the risk of exposure to ergonomic risk factors. This too seems to be accepted in his field, though the extent to which it has been directly tested is unclear. Finally, Turina discusses the development of this body of knowledge and the extent to which private industry, including the railroads, has been aware of and involved in this research.

Union Pacific does not directly challenge any of this but argues that Turina did not cite (and admitted during his deposition that he is not aware of) any research specific to osteoarthritis in the hands. According to Union Pacific, this means that the epidemiological research does not support Turina's opinions and his proposed testimony is, therefore, unreliable. Proposed expert testimony may be found unreliable where it is based on scientific studies that are too attenuated from or dissimilar to the facts of the case. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 144–45 (1997); *C.W. ex rel. Wood v. Textron, Inc.*, 807 F.3d 827 (7th Cir. 2015). I can properly exclude Turina's proposed expert testimony if it is based on "an inferential leap." *Textron*, 807 F.3d at 836.

I find that Turina's proposed testimony does not require such a leap. Turina cites numerous resources, which Union Pacific does not challenge, in support of his opinions, including a review of relevant scientific literature from the National Institute for Occupational Safety and Health (NIOSH) synthesizing more than 600 scientific studies on the relationship between ergonomic risk factors and musculoskeletal disorders, a book on occupational disorders of the upper extremity that discusses the hands, and resources from NIOSH on the proper ergonomic design and use of hand tools. The

research broadly supports Turina's opinions, and he need only take a small inferential step to apply it to the facts of this case. It is not so attenuated as to render his opinions unreliable.

Union Pacific next argues that Turina's investigation of Rowley's exposure to ergonomic risk factors was insufficient. Turina reviewed the deposition testimony of two of Rowley's co-workers and safety videos from Union Pacific and spoke with Rowley about common tasks that he performed. Based on this, Turina examined two such tasks—changing brake shoes and changing air hoses—in terms of the physical actions required, the conditions under which the tasks were performed, and the tools that Union Pacific provided. He concluded that performing these tasks regularly exposed Rowley's hands to a combination of ergonomic risk factors, especially forceful exertions combined with high levels of contact stresses from the tools that Union Pacific provided, often in cold temperatures. He further concluded that Union Pacific could have, at least, provided tools that were better designed, which could have minimized Rowley's exposure.

Union Pacific argues that Turina's opinions are unreliable because he failed to either conduct an on-site investigation or gather objective measurements of the ergonomic risk factors that Rowley faced in his job. Some courts have cited such methodological omissions as valid reasons for excluding similar proposed expert testimony. For example, in *Brown v. Burlington Northern Santa Fe Railway Co.*, 765 F.3d 765 (7th Cir. 2014), the Seventh Circuit held that the district court had not abused its discretion in excluding proposed expert testimony in a FELA case alleging cumulative trauma, in part because the expert had failed to conduct an analysis of the

plaintiff's job site. *Id.* at 773. However, that expert specifically said that such an analysis was necessary to his methodology. *Id.* at 770. If an expert fails to follow through with his own stated methodology, then his opinions may be found unreliable.

Turina's proposed testimony is distinguishable from that of the expert in *Brown*. Turina never claimed that it was necessary for him to see Rowley's job site or observe him at work. In fact, he indicated during his deposition that he has found, based on past professional experience, that such direct observation and measurement do not necessarily yield reliable or representative results. That may be especially true in a situation like this one. Rowley has not worked for Union Pacific in years; it would be impossible to directly observe him at work now or accurately measure his exposure to ergonomic risk factors over the course of his thirty-five-year career. I see no reason why direct observation or measurement would render Turina's opinions reliable while reliance on first-hand accounts and self-reports would not.

Turina can offer an expert opinion on ergonomic risk factors and general causation based on the testimony of Rowley and his co-workers. See Fed. R. Evid. 703 ("An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed."). If he does, the credibility of his testimony, and that of Rowley and his co-workers, is for the jury to assess. A reasonable jury, crediting this testimony, could find it helpful in resolving facts at issue in this case.

I find that Turina's proposed expert testimony is admissible. I will, therefore, deny Union Pacific's motion to exclude it from trial.

### III. ANDREW JASEK

Andrew Jasek is a board-certified rheumatologist. Rowley was referred to Jasek to rule out the possibility that Rowley had rheumatoid arthritis, as opposed to osteoarthritis. In September 2008, Jasek examined Rowley, reviewed x-rays of his hands, and diagnosed him with erosive arthritis (osteoarthritis). In March 2009, after Rowley had been restricted from work for two months, Rowley saw Jasek again and reported that his symptoms had improved. At that time, Jasek ruled out rheumatoid arthritis and confirmed his diagnosis of osteoarthritis. Jasek can testify about his diagnostic work identifying Rowley's condition and his treatment thereof, and Union Pacific does not argue otherwise.

However, Union Pacific does argue that Jasek cannot offer reliable expert testimony about the specific *cause* of Rowley's condition, and I agree. Rowley argues that Jasek employed "the differential diagnosis or etiology method of diagnosing and treating [him]." Pl.'s Mem., ECF No. 59, at 13. But, differential diagnosis and differential etiology are two distinct methodologies. A differential diagnosis focuses on "the *identity* of a specific ailment," while a "differential etiology . . . focuses on the *cause* . . . of an ailment." *Brown*, 765 F.3d at 772 (emphasis added) (first quoting and then citing *Myers v. Ill. Cent. R.R. Co.*, 629 F.3d 639, 644 (7th Cir. 2010)).

There is nothing in the record to suggest that Jasek conducted a differential etiology, much less a reliable one. "[I]n a differential etiology, the doctor rules in all the potential causes of a patient's ailment and then by systematically ruling out causes that would not apply to the patient, the physician arrives at what is the likely cause of the ailment." *Myers*, 629 F.3d at 644. Although "[t]he expert need not exclude all

alternatives with certainty,” he must at least “adequately account[] for obvious alternative explanations.” *Brown*, 765 F.3d 773 (first quoting *Schultz v. Akzo Nobel Paints, LLC*, 721 F.3d 426, 434 (7th Cir. 2013); and then citing *Gayton v. McCoy*, 593 F.3d 610 (7th Cir. 2010)). Jasek did not do this. He “suspected” that Rowley’s work may have aggravated his osteoarthritis. *Id.* at 23:1–:17. But, he also “suspected” that Rowley may have had a predisposition to erosive osteoarthritis because of family history. *Id.* at 16:14–17:4. Further, he said that “osteoarthritis is . . . very common” and that “it usually starts after the age of 45, 50.” *Id.* at 10:18–:22. And, he noted that “erosive arthritis . . . may have a genetic background . . . and starts in patients who are younger.” *Id.* at 16:7–:11. He did not clearly indicate that he believed any of these was more likely than any other to be the cause or a cause of Rowley’s arthritis; he never ruled out any of these potential causes; and he did not consider whether other factors—like Rowley’s exposure to vibrations from using his lawnmower or snow blower at home—may have caused or contributed to Rowley’s arthritis.

Jasek’s proposed causation testimony is similar to the proposed testimony that was at issue in *Myers v. Illinois Central Railroad Co.*, 629 F.3d 639 (7th Cir. 2010), another FELA case alleging cumulative trauma. In that case, the Seventh Circuit held that the district court had not abused its discretion in excluding that testimony, saying,

[I]t’s clear that the physicians did not use a differential etiology; they knew little to nothing about Myers’s medical history or his work. They did not “rule in” any potential causes or “rule out” any potential causes. They simply treated Myers and assumed his injuries stemmed from his work. In other words, the basis for their opinions is properly characterized as a hunch or an informed guess. And “the courtroom is not the place for scientific guesswork, even of the inspired sort.”

*Id.* at 645 (quoting *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 319 (7th Cir. 1996)). Jasek merely suspected that Rowley’s work was a potential cause of his ailment, and he



broadly failed to rule out or account for other potential causes. He also knew little to nothing about Rowley's work, saying only that he believed Rowley used a "very heavy hammer, hammering all day." Jasek Dep., ECF No. 59-3, at 23:10–:11. Jasek simply treated Rowley and assumed that his work contributed to his injuries. See *Myers*, 629 F.3d at 645. This is an insufficient basis for his proposed causation testimony.

Jasek's proposed causation testimony is unreliable and, therefore, inadmissible. I will grant Union Pacific's motion to exclude it.

#### **IV. DENNIS GATES**

Dennis Gates is a board-certified orthopedic surgeon. He has experience testifying on behalf of and treating railroad employees. Rowley retained Gates to examine him and relevant case materials and render an opinion as to whether Rowley's work for Union Pacific caused or aggravated his osteoarthritis. Gates reviewed Rowley's medical records, examined him, and interviewed him. Gates also reviewed a letter from Rowley clarifying his work duties. From this, Gates opines that Rowley's osteoarthritis was preexisting but that it was aggravated by his work, which caused it to become symptomatic and progress faster than it otherwise would have.

Gates can reliably testify about the progression of Rowley's condition and his symptoms over time. He reviewed and relies upon Rowley's medical records and his own education and experience treating railroad employees and others with similar conditions. This provides a sufficient basis for expert testimony about how Rowley's osteoarthritis developed over time. See Fed. R. Evid. 703 advisory committee's note to 1972 proposed rules ("[A] physician in his own practice bases his diagnosis on information from numerous sources and of considerable variety, including statements by

patients and relatives, reports and opinions from nurses, technicians and other doctors, hospital records, and X rays.”); see also *Walker v. Soo Line R.R. Co.*, 208 F.3d 581, 588 (7th Cir. 2000) (“Medical professionals have long been expected to rely on the opinions of other medical professionals in forming their opinions.”).

Gates cannot, however, reliably testify about the specific cause of Rowley’s osteoarthritis. Gates opines that Rowley’s condition was preexisting, but I cannot discern any basis for that conclusion from the materials that Rowley has submitted on this motion. Nor can I identify any basis upon which Gates could opine that Rowley’s work specifically caused his condition to worsen or progress faster than it otherwise would have. During his deposition, Gates said,

You can just say from -- from clinical experience, that if a person is doing this repetitive microtrauma in the cold, the disease always seems to progress fast. And if we stop them from doing that work, their symptoms always improve and the disease seems to slow down.

And so, it’s just your clinical thing as you see people who cannot do that and keep on doing their job or their occupation. They all get really worse than people who can change or get better.

Gates Dep., ECF No. 59-5, at 18:4–:14. Gates admitted, though, that he was discussing the symptoms of such ailments, not their underlying cause, and despite saying, “always,” when counsel said, “But it doesn’t *a/ways* get worse,” Gates replied, “No, of course not.” *Id.* at 30:6–:8 (emphasis added). The party putting forth proposed expert testimony has the burden of demonstrating that it is reliable. Fed. R. Evid. 702 advisory committee notes to the 2000 amendments. Rowley has failed to do that here. Gates’s opinion about the specific cause of Rowley’s osteoarthritis appears to be, at best, a hunch or educated guess unsupported by any clear methodology and inappropriate for presentation to a jury. See *Myers*, 629 F.3d at 645.

Rowley claims that Gates engaged in a differential etiology in this case, but I cannot find any indication in the record that he did. Unlike Jasek, Gates did mention Rowley's use of his lawnmower and snow blower, but he appears to have dismissed these out-of-hand as potential causes of Rowley's condition, despite the fact that Gates noted in an April 13, 2012 letter to counsel that "[d]oing anything with vibrations aggravates [Rowley's] pain; like a lawn mower." ECF No. 59-6, at 2. Gates also does not appear to have accounted for age or genetics as potential causes of Rowley's ailment. He notes, in a section of his April 13, 2012 letter titled "Causation," that

I think that it is well accepted that working at this heavy manual labor, repetitive motions and in the cold, repetitive minor injuries, will aggravate arthritis of the hands: make them more symptomatic and cause the progression to occur "quicker". And after speaking with Mr. Rowley about what he actually had to do at his particular job, makes this even clearer.

*Id.* at 3. As noted above, though, he admitted during his deposition that this is not *a/ways* the case.

Despite all this, Gates can reliably testify about general causation in this case. Union Pacific argues that he can't because he failed to cite specific scientific research supporting a causal relationship between work like Rowley's and ailments like Rowley's when asked about it during his deposition. He provided a list of sources supporting his position afterward, but Union Pacific argues that this shows that Gates arrived at his position without knowledge of or reliance on the scientific literature, which renders his opinion unreliable. I disagree. Gates said during his deposition that "there's been lots of that over a long period of time" and he could "get . . . a bunch of articles" supporting his opinion. Gates Dep., ECF No. 59-5, at 23:24–24:4. Gates, true to his word, provided such scientific authority after his deposition. He was clearly aware of the scientific literature on the topic prior to opining on causation in this case.

Further, Gates is sufficiently familiar with Rowley's work to make a reliable connection between it and the relevant scientific literature. Gates discussed Rowley's work with him and reviewed a letter from him further clarifying his duties. Gates wrote,

[B]ecause the railroad cars were outside, in the winter [Rowley] would have to hammer off ice and snow. He would crawl under cars, work in odd positions, etc. His hands would get banged up a lot, scraped, etc. He also related how they have to pull on heavy chains and cables, at times actually moving the cars by brute human force. He has done this job for 35 years. There were many repetitive tasks using his hands as required by this job.

ECF No. 59-6, at 1. Gates is clearly familiar enough with the details of Rowley's work to opine, based on his experience and the scientific literature, that his work *could have* contributed to his arthritis, even if he cannot reliably testify that it *did*.

I find that some, though not all, of Gates's proposed expert testimony is reliable and admissible. I will, therefore, grant in part and deny in part Union Pacific's motion to exclude it.

## V. CONCLUSION

**THEREFORE, IT IS ORDERED** that Union Pacific's motion to exclude Turina's proposed expert testimony (ECF No. 55) is **DENIED**.

**IT IS FURTHER ORDERED** that Union Pacific's motion to exclude proposed expert testimony by Jasek and Gates (ECF No. 57) is **GRANTED** as to Jasek and **GRANTED IN PART** and **DENIED IN PART** as to Gates.

Dated at Milwaukee, Wisconsin, this 3rd day of November, 2016.

s/ Lynn Adelman

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LYNN ADELMAN  
District Judge